

Advanced Java Lab

Week-10

Roll Number: 238W1A12c4

1. Demonstrate @Component, @Service, @Repository

Code:

@Component:

@Component is a generic Spring bean.
Use it for any general-purpose class

MessageComponent.java:

```
package com.example.demo;

import org.springframework.stereotype.Component;

@Component

public class MessageComponent {

    public String getMessage() {

        return "Hello from @Component!";

    }

}
```

@Service:

@Service is used for business logic classes.

UserService.java:

```
package com.example.demo;

import org.springframework.stereotype.Service;

@Service

public class UserService {

    public String getUsername() {

        return "Service: Returning Username";

    }

}
```

```
}  
}
```

@Repository:

@Repository is used for DAO (database access) classes.

StudentRepository.java:

```
package com.example.demo;
```

```
import org.springframework.stereotype.Repository;
```

```
@Repository
```

```
public class StudentRepository {  
    public String getStudent() {  
        return "Repository: Fetching Student Record";  
    }  
}
```

2. Use @Autowired and @Qualifier to Inject Dependencies

Code:

Greeting Interface:

```
package com.example.demo;  
  
public interface Greeting {  
    String greet();  
}
```

EnglishGreeting.java:

```
package com.example.demo;  
  
import org.springframework.stereotype.Component;  
  
@Component("englishGreeting")
```

```
public class EnglishGreeting implements Greeting {  
    public String greet() {  
        return "Hello!";  
    }  
}
```

TeluguGreeting.java:

```
package com.example.demo;
```

```
import org.springframework.stereotype.Component;
```

```
@Component("teluguGreeting")
```

```
public class TeluguGreeting implements Greeting {  
    public String greet() {  
        return "Namaskaram!";  
    }  
}
```

GreetingController.java:

```
package com.example.demo;
```

```
import org.springframework.beans.factory.annotation.Autowired;
```

```
import org.springframework.beans.factory.annotation.Qualifier;
```

```
import org.springframework.web.bind.annotation.GetMapping;
```

```
import org.springframework.web.bind.annotation.RestController;
```

```
@RestController
```

```
public class GreetingController {
```

```
    @Autowired
```

```
    @Qualifier("englishGreeting")
```

```
private Greeting english;
```

```
@Autowired
```

```
@Qualifier("teluguGreeting")
```

```
private Greeting telugu;
```

```
@GetMapping("/english")
```

```
public String englishGreeting() {
```

```
    return english.greet();
```

```
}
```

```
@GetMapping("/telugu")
```

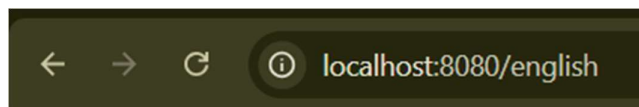
```
public String teluguGreeting() {
```

```
    return telugu.greet();
```

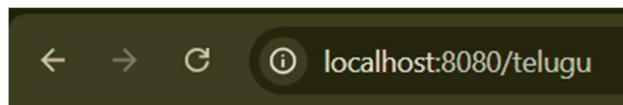
```
}
```

```
}
```

Output:



Hello!



Namaskaram!